CLAIMS

What is claimed is:

1. A solenoid switch comprising:

a frame;

a coil unit to selectively generate a magnetic field; and

a moving part comprising:

a first surface selectively in contact with the frame based upon the magnetic field of the coil unit,

a second surface not in contact with the frame, and

an anti-corrosion material coating the first and second surfaces, a thickness of the anti-corrosion material being thinner on the first surface than on the second surface.

2. The solenoid switch of claim 1, wherein the frame comprises:

a first surface selectively in contact with the first surface of the moving part based upon the magnetic field of the coil unit;

a second surface not in contact with the moving part; and

an anti-corrosion material coating the first and second surfaces of the frame,

wherein a thickness of the anti-corrosion material of the frame is thinner on the first surface of the frame than on the second surface of the frame.

3. The solenoid switch of claim 1, further comprising:

a permanent magnet to generate a magnetic field to attract the moving part to the frame, wherein the magnetic field of the coil unit offsets the magnetic field of the permanent magnet.

4. The solenoid switch of claim 2, wherein the thickness of the anti-corrosion material on the first surfaces of the moving part and the frame is about 3 μm.

5. The solenoid switch of claim 3, wherein the thickness of the anti-corrosion material on the second surfaces of the moving part and the frame is at least 7 μm.

6. A method of plating a solenoid switch including a frame having a contact surface, and a moving part comprising a contact surface selectively in contact with the contact surface of the frame, the method comprising:

plating the frame and the moving part with a first anti-corrosion material having a first thickness;

removing the first anti-corrosion material from the contact surfaces of the frame and the moving part; and

re-plating the frame and the moving part with a second anti-corrosion material having a second thickness.

7. The method of claim 6, wherein the second thickness is about 3 μm.

8. The method of claim 7, wherein a sum of the first thickness and the second thickness is at least 7 μm.

9. The method of claim 6, wherein the first and second anti-corrosion materials are a mixture of copper and nickel.

10. The method of claim 6, wherein the first and second anti-corrosion materials are nickel.

11. An apparatus to record and/or generate data to/from an optical medium, comprising:

a fixed frame;

a tray; and

a tray locking device, to selectively lock/unlock the tray to the fixed frame, comprising:

a locking post fixed on the fixed frame,

a first lever, rotatably installed on the tray, comprising a locking portion selectively locked/unlocked to/from the locking post and a cam to selectively interfere with the locking post to turn the first lever in a direction which the locking portion can lock to the locking post,

a first elastic member to bias the locking portion towards the locking post,

a solenoid switch, provided on the tray, comprising:

a frame comprising a contact surface and a non-contact surface,

a moving part comprising a contact surface to selectively contact

the contact surface of the frame and a non-contact surface not in contact with the frame,

a permanent magnet disposed within the frame to generate a magnetic force to attract the moving part,

a coil to selectively generate a magnetic force to offset the magnetic force of the permanent magnet, and

an anti-corrosion material coating the frame and the moving part,

a second lever rotatably mounted to the tray and connected to the moving part and the first lever, and

a second elastic member connected to the second lever to release the locking portion from the locking post when the moving part is detached from the frame,

wherein a thickness of the anti-corrosion material is thinner at the contact surfaces than at the non-contact surfaces of the frame and the moving part.